

Amended Page 3, Paragraph on Lines 29-30: Version with markings to show changes made

Figures [1(a) and (b)] 1A-1 through 1A-3 and 1B-1 through 1B-5 describe the ANOVA of ADHD scores for the genotypes of forty genes.

Amended Page 4, Paragraph on Lines 3-5: Version with markings to show changes made

[Figure 3 summarizes] Figures 3A-C summarize the results for individual genes that were included in the regression equation after all forty-two genes were entered as independent variables and the nonsignificant ones removed by backward elimination.

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Polymorphisms. The polymorphisms for the first 20 dopamine, serotonin, and norepinephrine genes are provided herein (see [Figure 1a] Figures 1A-1 through 1A-3). [Figure 1b describes] Figures 1B-1 through 1B-5 describe 22 additional genes, their associated polymorphisms, the results of ANOVA comparing the mean ADHD, ODD and CD scores for the three genotypes, and the resultant gene score based on the ANOVA results. See *Scoring of the Genes (supra)* for the rationale for the gene scoring and other aspects of the technique. Each gene were scored 0 to 2 based on either prior results in the literature (literature references are set forth in Comings et al., 2000c) about which genotypes were associated with the given phenotype, or based on ANOVA for the three genotypes (11, 12 and 22) on the same subjects used for the multivariate regression analysis. We have termed the latter ‘optimized’ gene scoring and it is used when there is no prior literature for a given gene or a given phenotype. Since all genes are optimized in the same fashion, this allows a comparison of the relative effect of the genes examined. The genes scores in [Figure 1b] Figures 1B-1 through 1B-5 are optimized genes scores. Since virtually none of these have previously been examined in ADHD, ODD or CD, no literature-based genes scores were available. The following polymorphisms have been developed in our own laboratory and have not been previously published.

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[Figure 1(b) lists] Figures 1B-1 through 1B-5 list the results of ANOVA using the continuous traits for ADHD, ODD or CD as the dependent variables and the three genotypes of the 22 additional genes as the independent variables. These results determine how the genes will be scored for the regression analysis. The gene scores for the 22 additional genes plus the 20 earlier described genes were then entered into the regression analysis as independent variables.

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Figure 2 presents the results for ADHD, ODD, and CD for all 42 genes. The diagram shows the genes and functional groups of genes that were included in the equation, the fraction of the variance (r^2) contributed, and the p values that were $< .05$. Figure 2 presents the sum of the r^2 values for the eight functional groups of genes, based on simply adding the individual r^2 values from Figures [1a] 1A-1 through 1A-3 and [1b] 1B-1 through 1B-5. The p values were based on performing an individual multivariate regression analysis on a given functional group of genes. The p values of those groups that were significant are given. Figure 2 presents the final r, r^2 , adjusted r^2 , F, p values, and the number of genes included for ADHD, ODD, and CD, for the 42 genes examined.

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